

### **AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings of claims in the application:

### **LISTING OF THE CLAIMS**

1-2. (Cancelled)

3. (Currently Amended) Device comprising a burner for combustion of a fuel/oxidant mixture within a combustion chamber in which a material is provided which endures a maximum temperature, with one or several supply lines for the fuel as well as the oxidation agent, in order to conduct these into the combustion chamber, characterized in that said combustion device with combustion temperature of fuel/oxidant mixture above the maximum temperature is designed in that at least one additional supply line [[is]] connected to a low combustion value gas supply in order to conduct a low combustion value gas into the combustion chamber[[,]] that allows the temperature during combustion to be lowered to a value below the maximum temperature.

4. (Previously Presented) Device according to Claim 3, characterized in that a combustion product from the combustion chamber is introduced, at least in part, via a supply line as additional gas, by means of which the temperature can be lowered during combustion.

5. (Original) Device according to Claim 3, characterized in that a pre-mix chamber is provided for the fuel/oxidant mixture, in which the fuel and the oxidant mixture can be mixed before combustion.

6. (Currently Amended) Device according to Claim 5, characterized in that the pre-mix chamber includes static mixing elements and is designed in such manner that in direction towards the combustion chamber, the flow velocity component of the mixture is greater in the pre-mix chamber than the flame velocity in the combustion chamber.

7. (Original) Device according to Claim 5, characterized in that the pre-mix chamber is also supplied with additional gas by means of which the combustion temperature can be lowered, so as to mix same with the fuel/oxidant mixture, preferably by mixing with fuel or oxidant before the pre-mix chamber.

8. (Currently Amended) Device according to Claim 5, characterized in that the size of a lateral surface of a side wall of the pre-mix chamber in proportion to the volume of the pre-mix chamber is selected in such manner that the side wall is able to accommodate[[, the]] free energy from detonation of gases in the pre-mix chamber.

9. (Original) Device according to Claim 5, characterized by cooling of the pre-mix chamber.

10. (Original) Device according to Claim 3, characterized in that there is provided in the combustion chamber a porous material with inter-connected hollow spaces suitable in size for flame development.

11. (Original) Device according to Claim 10, characterized by a porous material with inter-connected hollow spaces whose porosity changes over to larger pores in the direction toward the development of flame, with resulting critical Péclet number for the pore size at an inner border area, above which flame development takes place and below which flame development is suppressed.

12. (Original) Device according to Claim 11, characterized in that the combustion chamber has at least two zones with material of differing pore size, between which, pore size provides the critical Péclet number.

13. (Original) Device according to Claim 10, characterized in that the material with inter-connected hollow spaces presents, at least in part, bulk volume of bodies as they are utilized for systematic packings in thermal separation methods, such as spheres or shell bodies.

14. (Original) Device according to Claim 13 having a border area for zones of differing porosity comprised of a material of differing pore size, between which, pore size provides the critical Péclet number, characterized in that a grid is provided at the border area, like a grate in order to prevent discharge of the bodies from one zone into the other.

15. (Original) Device according to Claim 14, characterized in that the grid, in particular the grate is cooled.

16-20. (Cancelled)

21. (New) A system for combustion of a fuel/oxidant mixture comprising:  
a combustion chamber in which a material is provided which endures a maximum temperature;

at least one supply line in communication with combustion chamber for supplying at least one of fuel and an oxidation agent, in order to conduct these into the combustion chamber;

a low combustion value gas supply; and

an additional supply line in communication with the low combustion value gas supply and the combustion chamber for introducing a low combustion value gas into the combustion chamber to mix with the at least one of fuel and an oxidation agent to allow the temperature during combustion to be lowered below the maximum temperature.

22. (New) The system of Claim 21, wherein the low combustion value gas supply includes an outlet line in communication with an outlet of the combustion chamber.

23. (New) The system of Claim 22, wherein the outlet line is in communication with an inlet of a heat exchanger and the outlet of the heat exchanger is in communication with the additional supply line.

24. (New) The system of Claim 21, wherein the low combustion value gas supply comprises at least one of an inert gas source and a steam source.

25. (New) A system for combustion of a fuel/oxidant mixture comprising:  
a combustion chamber in which a material is provided which endures a maximum temperature, the combustion chamber having an inlet and an outlet;  
a pre-mix chamber disposed upstream from and in communication with the inlet of the combustion chamber;  
at least one supply line in communication with pre-mix chamber for supplying at least one of fuel and an oxidation agent to conduct these into the combustion chamber;  
a low combustion value gas supply; and  
an additional supply line in communication with the low combustion value gas supply and the pre-mix chamber for introducing a low combustion value gas into the combustion chamber that allows the temperature during combustion to be lowered below the maximum temperature.

26. (New) Device according to Claim 3, characterized in that the at least one additional supply line is in communication with the combustion chamber to deliver the low combustion value gas into the combustion chamber to mix the low combustion value gas with the fuel and the oxidation agent.

27. (New) Device according to Claim 3, further comprising a pre-mix chamber connected with the at least one supply line that allows mixing of the low combustion value gas with the fuel/oxidant mixture.